

DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY AFFAIRS (PERA)

BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

NOTICE OF ACCEPTANCE (NOA)

Willard Shutter Company, Inc. 4420 N.W. 35th Court Miami, Florida 33142

Scope:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

0.050" Aluminum Storm Panels Shutter DESCRIPTION:

APPROVAL DOCUMENT: Drawing No. 15-190, titled "0.050" Aluminum Storm Panel", sheets 1 through 7 of 7, prepared by EngCo. Inc., dated June 21, 2015, signed and sealed by Pedro De Figueiredo, P.E., on June 23, 2015, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA #11-1207.09 and consists of this page 1, evidence submitted pages E-1, E-2 & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by Helmy A. Makar, P.E.

MIAMI DADE COUNTY APPROVED

NOA No. 15-0706.04 Expiration Date: 12/07/2016 Approval Date: 12/31/2015

Willard Shutter Company, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #06-0221.01

A. DRAWINGS

1. Drawing No. 06-022, titled "0.050" Aluminum Storm Panel", sheets 1 through 7 of 7, prepared by EngCo. Inc., dated September 17, 2006, signed and sealed by Pedro De Figueiredo, P.E., on September 17, 2006.

B. TESTS

- 1. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of 0.050" aluminum storm panels, prepared by American Test Lab of South Florida, Report No. 0109.01-06, dated February 07, 2006, signed and sealed by William R. Mehner, P.E.
- 2. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of 0.050" aluminum storm panels, prepared by American Test Lab of South Florida, Report No. 1206.01-00, dated May 02, 2001, signed and sealed by William R. Mehner, P.E. and Henry Hattem, P.E.

C. CALCULATIONS

- 1. Comparative Analysis, Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated February 15, 2006, pages 1 through 19, prepared by Engco, Inc., signed and sealed by Pedro De Figueiredo, P.E., on February 15, 2006.
- 2. Comparative Analysis, Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated September 17, 2006, pages 1 through 24, prepared by Engco, Inc., signed and sealed by Pedro De Figueiredo, P.E., on September 17, 2006.

D. QUALITY ASSURANCE

1. By Miami-Dade County Building Code Compliance Office.

E. MATERIAL CERTIFICATIONS

1. Certified Tensile Test Report by QC Metallurgical, Inc., Report No. 6AM-39, dated January 20, 2006 for 3 samples #0109.01-06 Specimens B, D, I, signed and sealed by Frank E. Grate Jr., P.E.

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 09-0528.01

A. DRAWINGS

1. Drawing No. 09-088, titled "0.050" Aluminum Storm Panel", sheets 1 through 7 of 7, prepared by EngCo. Inc., dated April 30, 2009, signed and sealed by Pedro De Figueiredo, P.E., on May 05, 2009.

Helmy A. Makar, P.E., M.S. Product Control Section Supervisor

NOA No. 15-0706.04

Expiration Date: 12/07/2016 Approval Date: 12/31/2015

Willard Shutter Company, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated February 15, 2006, pages 1 through 19, prepared by Engco, Inc., signed and sealed by Pedro De Figueiredo, P.E., on February 15, 2006.

D. QUALITY ASSURANCE

1. By Miami-Dade County Building Code Compliance Office.

E. MATERIAL CERTIFICATIONS

1. None.

F. OTHERS

1. Letter prepared by Engco, Inc., dated May 01, 2009, signed and sealed by Pedro De Figueiredo, P.E., on August 18, 2009, stating that this product is in compliance with the Florida Building Code, 2007 edition.

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-1207.09

A. DRAWINGS

1. Drawing No. 12-008, titled "0.050" Aluminum Storm Panel", sheets 1 through 7 of 7, prepared by EngCo. Inc., dated January 25, 2012, signed and sealed by Pedro De Figueiredo, P.E., on April 10, 2012.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

1. By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs (PERA).

E. MATERIAL CERTIFICATIONS

1. None.

F. OTHERS

1. Letter prepared by Engco, Inc., dated January 25, 2012, signed and sealed by Pedro De Figueiredo, P.E., stating that this product is in compliance with the Florida Building Code, 2007 & 2010 editions.

(Helmy A. Makar, P.E., M.S.

Product Control Section Supervisor NOA No. 15-0706.04

Expiration Date: 12/07/2016 Approval Date: 12/31/2015

Willard Shutter Company, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. 15-190, titled "0.050" Aluminum Storm Panel", sheets 1 through 7 of 7, prepared by EngCo. Inc., dated June 21, 2015, signed and sealed by Pedro De Figueiredo, P.E., on June 23, 2015.

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor Calculations and details for 0.050" Aluminum Storm Panels, dated June 23, 2015, 6 pages, prepared by Engco, Inc., signed and sealed by Pedro De Figueiredo, P.E., on June 23, 2015.

D. QUALITY ASSURANCE

1. By Miami-Dade County Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. OTHERS

1. Letter prepared by Engco, Inc., dated June 21, 2015, signed and sealed by Pedro De Figueiredo, P.E., stating that this product is in compliance with the Florida Building Code, 2014 Edition.

Helmy A. Makar, P.E., M.S. Product Control Section Supervisor

> NOA No. 15-0706.04 Expiration Date: 12/07/2016 Approval Date: 12/31/2015

GENERAL NOTES: (FLORIDA BUILDING CODE 2014 - HVHZ \$ non HVHZ)

- I THIS PRODUCT IS DESIGNED AND TESTED (TAS 201, 202, 203) IN ACCORDANCE WITH THE THE FLORIDA BUILDING CODE 2014 EDITION. PRODUCT CAN BE USED WHERE CODE IS APPLICABLE INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
- 2- POSTING: AN EMBOSSED OR PRINTED LABEL SHALL BE PROVIDED AS PER FBC 2014 SECTION 1710.8.3.1. IT SHALL BE LOCATED ON EACH PANEL SPACED NOT MORE THAN THREE FEET AND SHALL FACE THE EXTERIOR OR OUTSIDE. LABEL SHALL PROVIDE THE FOLLOWING INFORMATION:

"WILLARD SHUTTERS - MIAMI - FLORIDA O.O5 ALUMINUM HURRICANE PANEL LARGE MISSILE IMPACT RESISTANT MIAMI-DADE COUNTY PRODUCT APPROVED

3- MATERIAL:

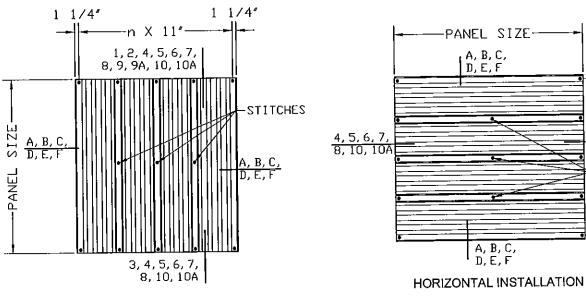
- 3.1 STORM PANELS SHALL BE 0.05" ALUMINUM 5052-H32 ALLOY.
- 3.2 ALL ALUMINUM EXTRUSIONS SHALL BE GOG3-TG OR AS INDICATED IN THIS SET OF DRAWINGS.
- 4- ANCHORS SHALL BE AS SHOWN ON THIS APPROVAL. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING.
- 5- LOADS: PROJECT DESIGNED PRESSURES, PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER, AS DETERMINED FROM SECTION 1620 AND ASCE 7-10 MUST BE MULTIPLIED BY 0.6 FACTOR. THE CALCULATED PROJECT PRESSURES MUST NOT EXCEED THE ALLOWABLE PRESSURES FOR EACH COMPONENT TO BE USED.
- 6- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
 - 6.1 THE STABILITY OF THE STRUCTURE WHERE THE PRODUCT IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
 - 6.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, WIND LOADS, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
 - 6.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT
- 7-PANELS CAN BE OVERLAPPED TO CREATE A 1/2 PANEL INSTALLATION.
- 8- DISSIMILAR MATERIALS: WHERE ALUMINUM IS IN CONTACT OR FASTENED TO DISSIMILAR MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL, INSTALLATION SHALL MEET THE REQUIREMENTS OF CHAPTER M.7 OF THE ALUMINUM DESIGN MANUAL 2010.

TABLE OF CONTENTS:

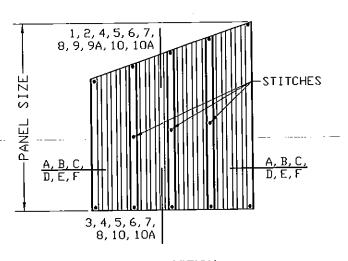
SHEET 1	DESCRIPTION GENERAL NOTES & TYPICAL ELEVATIONS , ALLOWABLE DESIGN PRESSURES TABLE 1.
5	COMPONENTS DETAILS AND SCHEDULE
3	ANCHOR SCHEDULE AND ANCHOR TABLE 2.
4	DETAILS MOUNT TYPES 1, 2, 3, & 4
5	DETAILS MOUNT TYPES 5, 6, 7 & 8
. 6	DETAILS MOUNT TYPES 9, 9A, 10 & 10A
7	DETAILS SIDE CLOSURE SECTION

TYPICAL ELEVATION

PANELS CAN BE INSTALLED VERTICALLY OR HORIZONTALLY USING APPLICABLE ANCHORING DETAILS



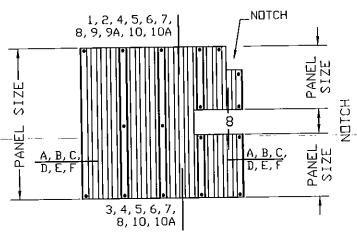
VERTICAL INSTALLATION



SLOPPED OPTION

TABLE 1
PANEL ALLOWABLE DESIGNED PRESSURES:

	·						
MAX. PANEL	RATING						
SIZE	(+/-)						
(IN)	(PSF)						
108	60						
96	75						
84	90						
72	105						
60	120						
	ARE REQUIRED FOR						

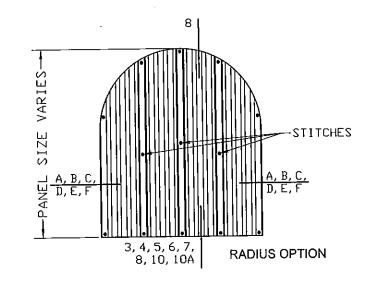


1, 5, 6, 7,

8, 10, 10A

STITCHES

NOTCHED OPTION



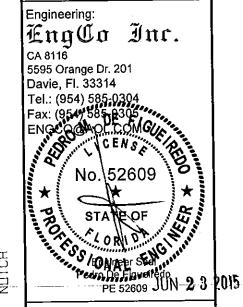
MANUFACTURER: WILLARD

SHUTTER COMPANY, INC. 4420 NW 35TH COURT MIAMI, FL 33142

Tel.: (305) 633-0162 Fax.: (305) 638-8634

PRODUCT:

0.050 ALUMINUM STORM PANEL



MIAMI-DADE BCCO:

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 15 -0706.02
Expiration Date 12/07/2016
By American Product Control

Date: 06/21/15 Scale: NA Design by: PPMF

Drawing Number 15-190

SHEET 1 of 7

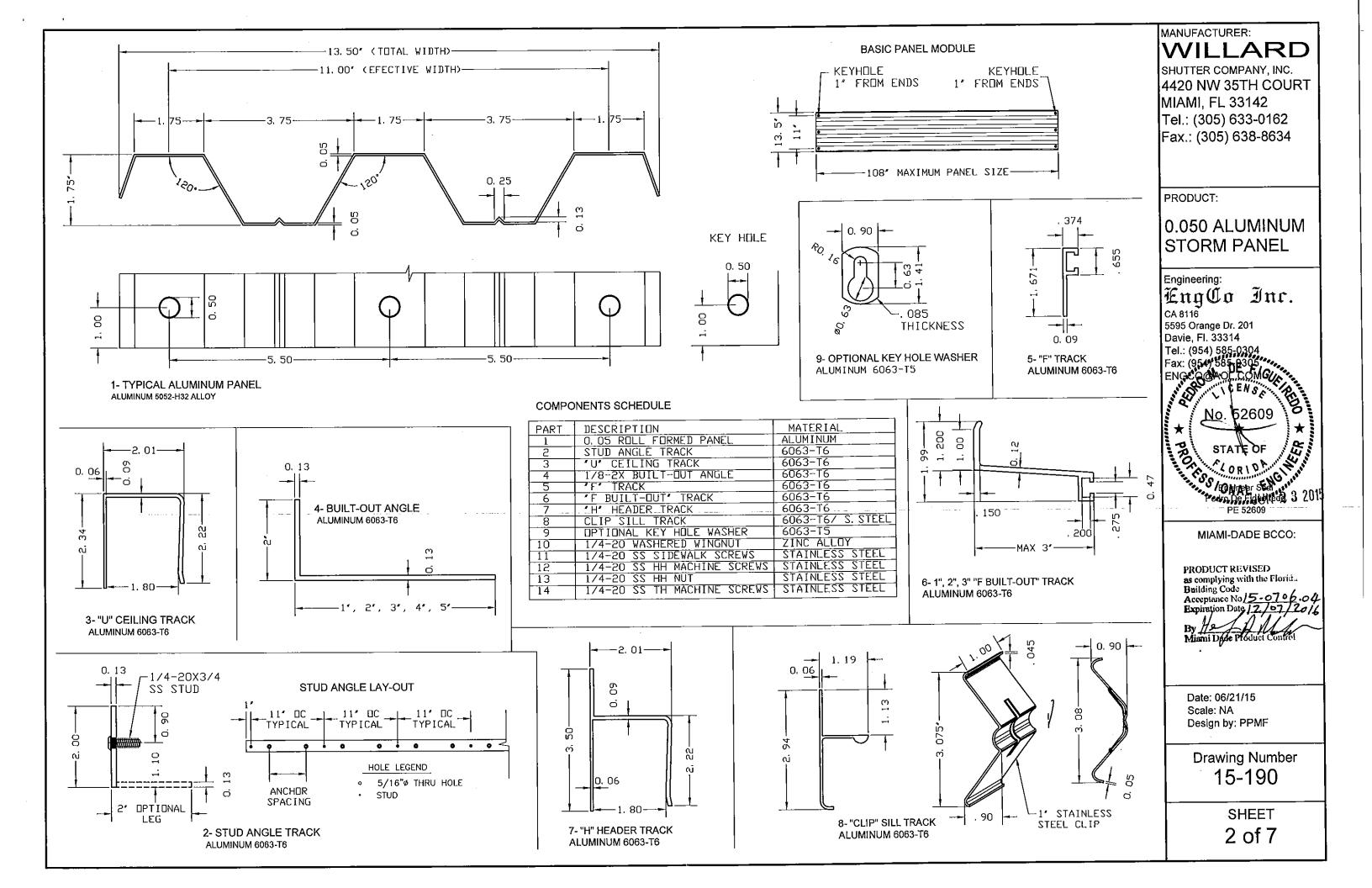


TABLE 2 MAXIMUM ANCHOR SPACING ON CENTER

-MOUNT TYPE - SHEETS 4, 5 AND 6

-DESIGNED **PRESSURES**

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12

6

PANEL HEIGHT: 84"

DESIGNED PRESSURE: Pd= 90 PSF

ANCHOR TYPE D2 - SEE ANCHOR SCHEDULE MOUNT TYPE 10A - SEE SHEET 6 OF 7

MAXIMUM ANCHOR SPACING: 12" DC

EDGE DISTANCE - 3/4"

EMBEDMENT: 1 1/2'

12 8 11 12 4 6

-ANCHOR TYPE SEE ANCHOR SCHEDULE

12

NOTES: 1- USE TABLE 2 IN CONJUNCTION WITH TABLE 1

12

12

2- ANCHOR SPACING CAN BE CALULATED BY INTERPOLATION BETWEEN LOAD VALUES

ANCHOR SCHEDULE:

8

6

ΙN

TYPE	DESCRIPTION	EMBED.	EDGE DIST
A	1/4" TAPCONS/ ULTRACON INTO CONCRETE (FC'=3192 PSI)	1 3/4"	2 1/2"
A1	1/4" TAPCONS/ ULTRACON INTO INTO CMU	1 1/4"	2 1/2"
A2	1/4" TAPCONS/ ULTRACON INTO WOOD (SG>=, 55)	1 1/2"	3/4″
В	1/4-20 MASONRY ANCHORS INTO CONCRETE (FC' = 3000PSI)	7/8"	3″
B1	1/4-20 MASONRY ANCHORS INTO CMU	7/8*	3"
С	1/4-20 WOOD BUSHING INTO WOOD (SG>=, 55)	3/4"	3/4"
D	1/4" TAPCON SG INTO CONCRETE (FC'=3295 PSI)	1 3/4"	2 1/2"
D1	1/4" TAPCON SG INTO CMU	1 1/4"	2 1/2"
D5	1/4" TAPCON SG INTO 2X6 SOUTHERN PINE WOOD (SG>=, 55)	1 1/2"	3/4"

NOTES:

1- EMBEDMENT IS BEYOND WALL DRESSING.

2- USE THIS ANCHOR SCHEDULE WITH TABLE 2

3- ANCHORS D, D1 AND D2 REQUIRE STRUCTURAL INSPECTION

A- 1/4" TAPCON BY ITW DR ULTRACON BY ELCO

16

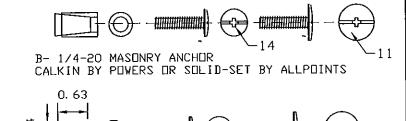
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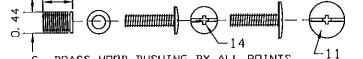
 12
 8
 12

 12
 5
 11



D- TAPCON SG BY ITW





C- BRASS WOOD BUSHING BY ALL POINTS

MANUFACTURER:

WILLARD

SHUTTER COMPANY, INC. |4420 NW 35TH COURT MIAMI, FL 33142

Tel.: (305) 633-0162 Fax.: (305) 638-8634

PRODUCT:

0.050 ALUMINUM STORM PANEL

Engineering: EngCo Inc. CA 8116 5595 Orange Dr. 201 Davie, Fl. 33314 Tel.: (954) 585-0304
Fax: (954) 585-2305
ENGCO (NO.) C.C.M. Peda De Flaveriedo PE 52600 N. 2.3.201

MIAMI-DADE BCCO:

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 5-0706.04
Expiration Date 12/07/20/6

Date: 06/21/15 Scale: NA Design by: PPMF

Drawing Number 15-190

> SHEET 3 of 7

